

WHAT IS CLAIMED IS:

1. A cooking method for pulp, which comprises polysulfide cooking method pulping a lignocellulose material with an alkaline cooking liquor containing polysulfides in the presence of a quinone-hydroquinone compound, wherein the oxidation-reduction potential of the quinone-hydroquinone compound in the form present during the cooking, which potential is a value calculated as a standard oxidation-reduction potential ( $E_a$ ) with a hydrogen ion activity of 1, is from 0.12 to 0.25V to the standard hydrogen electrode potential.
2. The cooking method for pulp according to Claim 1, wherein the oxidation-reduction potential, which potential is a value calculated as a standard oxidation-reduction potential ( $E_a$ ) with a hydrogen ion activity of 1, is from 0.14 to 0.20V to the standard hydrogen electrode potential.
3. The cooking method for pulp according to Claim 1, wherein the concentration of polysulfide sulfur in the alkaline cooking liquor containing polysulfides, is at least 6 g/l.
4. The cooking method for pulp according to Claim 1, wherein the concentration of polysulfide sulfur in the alkaline cooking liquor containing polysulfides, is at least 8 g/l.
5. The cooking method for pulp according to Claim 1, wherein the alkaline cooking liquor containing

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polysulfides is produced by electrolysis of white liquor or green liquor.

6. The cooking method for pulp according to Claim 1, wherein the concentration of Na<sub>2</sub>S-state sulfur calculated  
5 as Na<sub>2</sub>O in the alkaline cooking liquor containing polysulfides, is at least 10 g/l.

7. The cooking method for pulp according to Claim 1, wherein the alkaline cooking liquor during the cooking  
10 contains from 0.01 to 1.5 wt% of the quinone-hydroquinone compound based on bone-dry chip.

8. The cooking method for pulp according to Claim 1, wherein the liquid to wood ratio of the cooking liquor during the cooking is from 1.5 to 5.0 l/kg based on bone-dry chip.

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